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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/748,674

12/31/2003

Tamas Major

47092.00067

2812

32294

7590

09/02/2008

SQUIRE, SANDERS & DEMPSEY L.L.P.

8000 TOWERS CRESCENT DRIVE

14TH FLOOR

VIENNA, VA 22182-6212

EXAMINER

PATEL, JAY P

ART UNIT

PAPER NUMBER

2619

MAIL DATE

DELIVERY MODE

09/02/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/748,674	Applicant(s) MAJOR ET AL.	
	Examiner JAY P. PATEL	Art Unit 2619	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

2. Claims 1-14 are rejected under 35 U.S.C. 102(a) as being anticipated by Wang.
3. In regards to claim 1, Wang show in figure 13, a configuration of a router system 1300 (An apparatus) with two virtual routers VR1 and VR2 (at least two virtual routers to which said separate dedicated link layers are configured to at least one of transmit data packets to and receive data packets from the packet data network) which share the switching fabric bandwidth (sharing an available capacity); the resource allocator 620 allocates half of the bandwidth of interface 1 to VR1 and half of the bandwidth to VR2 (at least two separate dedicated link layers having predetermined dedicated link capacities; interface 1 anticipates, at least one of a real link layer and a physical layer) (see page 5, paragraphs 71 and 72).
4. In regards to claim 2, each virtual router is allocated a bandwidth of 5 Gbps.
5. In regards to claim 3, the resource allocator 620 allocates half of bandwidth to VR1 and half bandwidth to VR2.
6. In regards to claim 4, figure 5 shows memory 514; memory 514 stores one or more routing table.
7. In regards to claim 5, figure 13 is a configuration of a stand alone router system.

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8. In regards to claim 6, each virtual router may perform the functions of one or more regional routers, backbone routers, and/or edge routers (see paragraph 55 on page 4).

9. In regards to claim 7, Wang shows in figure 2, a central network 210, connected to customer networks 251-253 (a plurality of routers). Furthermore, Wang show in figure 13, a configuration of a router system 1300 with two virtual routers VR1 and VR2 which share the switching fabric bandwidth (sharing an available capacity); the resource allocator 620 allocates half of the bandwidth of interface 1 to VR1 and half of the bandwidth to VR2 (at least two separate dedicated link layers having predetermined dedicated link capacities; interface 1 anticipates, at least one of a real link layer and a physical layer) (see page 5, paragraphs 71 and 72).

In further regards to claim 7, each virtual router may perform the functions of one or more regional routers, backbone routers, and/or edge routers (see paragraph 55 on page 4). Furthermore, POP 400 is inclusive of router system 410 (see figure 4) and router system 410 is further inclusive of virtual routers 630 (see figure 6).

Furthermore, POPs 212-222 in figure 2 may include one or more routing systems that decide how and where to send packets of information (see paragraph 31 on page 2). Furthermore, CPEs 240-244 may include one (a first set of router devices among said plurality of router devices, wherein said first set of router devices includes a first set of virtual routers means that are connected via a first set of dedicated link layers to for at least a first virtual network) or more routers (a second set of routers among said plurality of router devices, wherein said second set of router devices includes a second

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set of virtual router means that are connected via a second set of dedicated link layers to form at least a separate second virtual network) for connecting a customer network 251-253 to a POP 212-220 (see paragraph 33 on page 2).

In regards to claim 8, each virtual router may perform the functions of one or more regional routers, backbone routers, and/or edge routers (see paragraph 55 on page 4) and furthermore, CPEs 240-244 may include one or more routers for connecting a customer network 251-253 to a POP 212-220 (see paragraph 33 on page 2).

10. In regards to claim 9, Wang shows in figure 2, a central network 210, connected to customer networks 251-253 (a packet data network). Wang shows in figure 13, a configuration of a router system 1300 with two virtual routers VR1 and VR2 which share the switching fabric bandwidth (sharing network resources); the resource allocator 620 allocates half of the bandwidth of interface 1 to VR1 and half of the bandwidth to VR2 (separating a plurality of link layers into at least a first separated link layer and a second separated link layer and allocating predetermined portions of an available link layer capacity to said first separated link layer and a said second separate link layer) (see page 5, paragraphs 71 and 72).

In further regards to claim 9, each virtual router may perform the functions of one or more regional routers, backbone routers, and/or edge routers (see paragraph 55 on page 4) and furthermore, CPEs 240-244 may include one or more routers for connecting a customer network 251-253 to a POP 212-220 (see paragraph 33 on page 2). And furthermore, since the bandwidth is allocated between the virtual routers, Wang

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also anticipates using first separated link layers for data transmission in a first virtual network and a second separated link layer for data transmission in a second virtual network.

In regards to claim 10, each virtual router is allocated a bandwidth of 5 Gbps.

11. In regards to claim 11, Wang show in figure 13, a configuration of a router system 1300 (An apparatus) with two virtual routers VR1 and VR2 (at least two virtual routers to which said separate dedicated link layers are configured to at least one of transmit data packets to and receive data packets from the packet data network) which share the switching fabric bandwidth (sharing an available capacity); the resource allocator 620 allocates half of the bandwidth of interface 1 to VR1 and half of the bandwidth to VR2 (at least two separate dedicated link layers having predetermined dedicated link capacities; interface 1 anticipates, at least one of a real link layer and a physical layer) (see page 5, paragraphs 71 and 72).

12. In regards to claim 12, Wang shows in figure 2, a central network 210, connected to customer networks 251-253. Wang shows in figure 13, a configuration of a router system 1300 with two virtual routers VR1 and VR2 which share the switching fabric bandwidth (sharing network resources); the resource allocator 620 allocates half of the bandwidth of interface 1 to VR1 and half of the bandwidth to VR2 (separating means for separating a plurality of link layers into at least a first separated link layer and a second separated link layer and allocation means for allocating predetermined portions of an available link layer capacity to said first separated link layer and a said second separate link layer) (see page 5, paragraphs 71 and 72).

In further regards to claim 12, each virtual router may perform the functions of one or more regional routers, backbone routers, and/or edge routers (see paragraph 55 on page 4) and furthermore, CPEs 240-244 may include one or more routers for connecting a customer network 251-253 to a POP 212-220 (see paragraph 33 on page 2). And furthermore, since the bandwidth is allocated between the virtual routers, Wang also anticipates transmission means for using first separated link layers for data transmission in a first virtual network and a second separated link layer for data transmission in a second virtual network.

13. In regards to claim 13, Wang shows in figure 2, a central network 210, connected to customer networks 251-253. Wang shows in figure 13, a configuration of a router system 1300 with two virtual routers VR1 and VR2 which share the switching fabric bandwidth (sharing network resources); the resource allocator 620 allocates half of the bandwidth of interface 1 to VR1 and half of the bandwidth to VR2 (a first processor configured to separate a plurality of link layers into at least a first separated link layer and a second separated link layer and a second processor configured to allocate predetermined portions of an available link layer capacity to said first separated link layer and a said second separate link layer) (see page 5, paragraphs 71 and 72).

In further regards to claim 13, each virtual router may perform the functions of one or more regional routers, backbone routers, and/or edge routers (see paragraph 55 on page 4) and furthermore, CPEs 240-244 may include one or more routers for connecting a customer network 251-253 to a POP 212-220 (see paragraph 33 on page 2). And furthermore, since the bandwidth is allocated between the virtual routers, Wang

also anticipates a transmitter configured to use said first separated link layers for data transmission in a first virtual network and a second separated link layer for data transmission in a second virtual network.

14. In regards to claim 14, Wang shows in figure 2, a central network 210, connected to customer networks 251-253 (a plurality of routers). Furthermore, Wang show in figure 13, a configuration of a router system 1300 with two virtual routers VR1 and VR2 which share the switching fabric bandwidth (sharing an available capacity); the resource allocator 620 allocates half of the bandwidth of interface 1 to VR1 and half of the bandwidth to VR2 (at least two separate dedicated link layers having predetermined dedicated link capacities; interface 1 anticipates, at least one of a real link layer and a physical layer) (see page 5, paragraphs 71 and 72).

In further regards to claim 14, each virtual router may perform the functions of one or more regional routers, backbone routers, and/or edge routers (see paragraph 55 on page 4). Furthermore, POP 400 is inclusive of router system 410 (see figure 4) and router system 410 is further inclusive of virtual routers 630 (see figure 6).

Furthermore, POPs 212-222 in figure 2 may include one or more routing systems that decide how and where to send packets of information (see paragraph 31 on page 2). Furthermore, CPEs 240-244 may include one (a first set of router devices among said plurality of router devices, wherein said first set of router devices includes a first set of virtual routers means that are connected via a first set of dedicated link layers to for at least a first virtual network) or more routers (a second set of routers among said plurality of router devices, wherein said second set of router devices includes a second

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set of virtual router means that are connected via a second set of dedicated link layers to form at least a separate second virtual network) for connecting a customer network 251-253 to a POP 212-220 (see paragraph 33 on page 2).

Response to Arguments

15. Applicant's arguments filed 5/13/2008 have been fully considered but they are not persuasive.

16. The applicant argues that according to paragraph 72 on page 5 of the Wang reference, the separate dedicated link layers are not taught because the bandwidth is divided. However, if each virtual router is allocated 5Gbps, then at least 5Gbps is dedicated. The fact that both sub interfaces are transparent to each other is relevant according to the examiner. Furthermore, the applicant states that Wang fails to disclose or suggest "at least two virtual routers to which said separate dedicated link layers are configured to at least one of transmit data packets to and received data packets from said packet data network." However, the applicant fails to specifically point out how Wang fails to teach this limitation.

Conclusion

17. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAY P. PATEL whose telephone number is (571)272-3086. The examiner can normally be reached on M-F 9:00 am - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Jay P. Patel
Examiner
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/J. P. P./
Examiner, Art Unit 2619

/Edan Orgad/

Supervisory Patent Examiner, Art Unit 2619